#### **F21V**

# DETAILS OF LIGHTING DEVICES, OF GENERAL APPLICATION

#### **Definition statement**

This subclass/group covers:

Details of parts involved in light emission or distribution

Details of those parts not involved in light emission or distribution, e.g. fittings

Special adaptation related to the use of a non-electric light sources

#### References relevant to classification in this subclass

This subclass/group does not cover:

Details of light guides adapted for lighting devices or systems	G02B 6/0001

## Special rules of classification within this subclass

"Invention information" is identified with ECLA symbols, whereas "additional information" is identified with Indexing Code symbols

#### F21V 1/00

Shades for light sources [N: i.e. lampshades for table, floor, wall or ceiling lamps]

#### F21V 1/04

rigid (F21V 1/08 takes precedence)

## References relevant to classification in this group

This subclass/group does not cover:

Adjustable frame of a shade for light	F21V 1/08
source	

## F21V 1/06

foldable or collapsible

Attention is drawn to the following places, which may be of interest for search:

Fastening of component parts of	F21V 17/007
lighting devices, e.g. shades, globes,	
refractors, reflectors, filters, screens,	
grids or protective cages, with	
provision for shipment or storage	

## F21V 1/08

## adjustable

### Informative references

Attention is drawn to the following places, which may be of interest for search:

distribution of the light emitted by	F21V 14/00
adjustment of parts	

## F21V 1/10

# **Rotating shades**

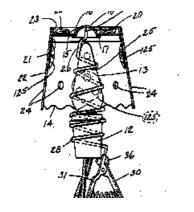
#### **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

Example: US1972687

Rotating glass cover or globe or shade or fins due to heat of a light source



#### F21V 1/14

## Covers for frames; Frameless shades

#### **Definition statement**

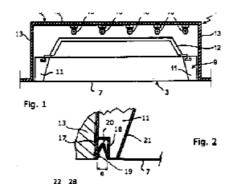
This subclass/group covers:

Shades characterised by the material

Stretched fly attached to a ceiling frame

Example: FR2952087

A stretched fly attached to a ceiling frame



## F21V 3/00

Globes; Bowls; Cover glasses (with refracting properties <u>F21V</u> <u>5/00</u>; with reflecting properties <u>F21V</u> <u>7/00</u>)

#### **Definition statement**

This subclass/group covers:

Globes for street lighting devices

Glass cover for automotive vehicles

Globes, bowls, cover glasses characterised by their shapes

Globes, bowls, cover glasses characterised by material, coatings or surface treatments

# References relevant to classification in this group

With refracting properties	F21V 5/00
With reflecting properties	F21V 7/00

Attention is drawn to the following places, which may be of interest for search:

Transparent cover plates for vehicle headlamps and rear lamps	F21S 48/12, F21S 48/22

## F21V 5/00

Refractors for light sources [N: (for vehicle rear lights <u>F21S</u> <u>48/2212</u>; for vehicle head lamps <u>F21S</u> <u>48/1225</u> )]

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Producing optical elements, e.g. lenses, prisms (grinding or polishing of optical elements B24B; constructional form of optical elements G02B; optical parts of spectacles G02C 7/00)	B29D 11/00
Refractors for vehicle headlamps and rear lamps	F21S 48/12, F21S 48/22
Combinations of only two kinds of elements being reflectors and refractors	F21V 13/04
Combinations of only three kinds of elements being reflectors, refractors, and filters	F21V 13/14
Changing the characteristics or distribution of the light emitted by adjustment of parts by movement of refractors	F21V 14/06
Details of kinds concerned with light emission or distribution solely applicable to the electric portable lighting devices	F21L 15/02
Optical elements	<u>G02B</u> 4

## F21V 5/007

[N: Array of lenses or refractors for a cluster of light sources, e.g. for arrangement of multiple light sources in one plane (combination of two or more refractors F21V 5/008)]

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Simple or compound lenses; Arrays	G02B 3/0006

## F21V 5/02

of prismatic shape (F21V 5/04 takes precedence)

## References relevant to classification in this group

This subclass/group does not cover:

Refractor of lens shape	<u>F21V 5/04</u>

## F21V 5/04

## of lens shape

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Simple or compound lenses	G02B 3/00 G02B17/09F
Optical system adapting the beam shape of a semiconductor light source such as a laser diode or an LED, e.g. for efficiently coupling into optical fibres	G02B17/09F

## F21V 5/045

[N: the lens having discontinuous faces, e.g. Fresnel lenses]

Attention is drawn to the following places, which may be of interest for search:

Simple or compound lenses with	G02B 3/08
non-spherical faces with	
discontinuous faces, e.g. Fresnel lens	

## F21V 5/046

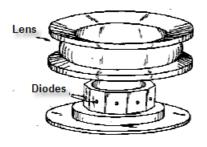
[N: the lens having a rotationally symmetrical shape about an axis for transmitting light in a direction mainly perpendicular to this axis, e.g. ring or annular lens with light source disposed inside the ring]

#### **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

**Example: WO0186198** 



### F21V 5/048

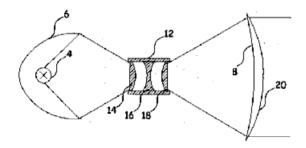
[N:the lens being a simple lens adapted to cooperate with a point-like source for emitting mainly in one direction and having an axis coincident with the main light transmission direction, e.g. convergent or divergent lenses, plano-concave or plano-convex lenses]

#### **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

Ex.: WO2007045242



## F21V 5/08

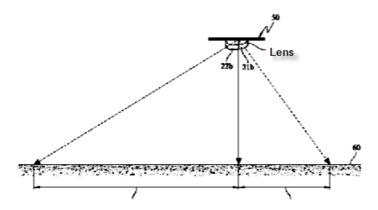
# producing an asymmetric light distribution

## **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

Ex.: US2009225551



## F21V 7/00

Reflectors for light sources [N: (for vehicle rear lights <u>F21S</u> <u>48/23</u>; for vehicle head lamps <u>F21S</u> <u>48/1317</u>)]

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Details of kinds concerned with light emission or distribution solely applicable to the electric portable lighting devices	F21L 15/02
Reflectors for vehicle headlamps or rear lamps	F21S 48/13, F21S 48/23

Combinations of two kinds of elements one being of reflector and on of the following: refractor, filter or screen	F21V 13/04, F21V 13/08, <b>F21V14/10</b>
Combinations of three kinds of elements being reflectors, refractors, and filters	F21V 13/14
Changing the characteristics or distribution of the light emitted by adjustment of parts by movement of reflectors	F21V 14/04
System with reflecting surfaces using mirrors only, for light condensing, e.g. for use with a light emitter	G02B 17/0668
Systems with reflecting surfaces, with or without refracting elements for light condensing, e.g. for use with a light emitter	G02B 17/0868
Optical elements other than lenses: Mirrors	G02B 5/08
Projectors or projection-type viewers: Reflectors in projection beam	G03B 21/28

## F21V 7/0008

# [N:providing for indirect lighting]

## **Definition statement**

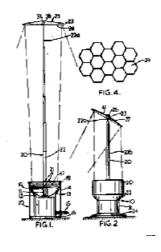
This subclass/group covers:

The lighting devices emitting light towards the ceiling and not toward the surface of interest to be lit

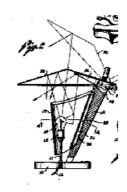
Lighting devices, the light beams of which are not being directed directly toward the aim, e.g. by means of reflectors

Illustrative example of subject matter classified in this group.

Example: US3671735



Example: US2744192



# F21V 7/0025

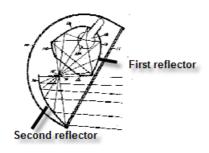
# [N: Combination of two or more reflectors for a single light source]

## **Definition statement**

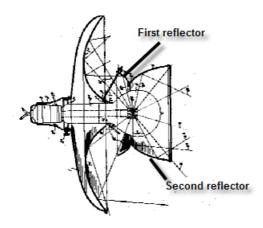
This subclass/group covers:

Illustrative example of subject matter classified in this group.

US1300202



US1286535



## References relevant to classification in this group

This subclass/group does not cover:

Array of reflectors for a cluster of light	F21V 7/0083
sources	

### F21V 7/005

# [N: with an elongated shape to cooperate with linear light sources]

## **Definition statement**

This subclass/group covers:

Elongated reflective surface with its axis parallel to the axis of an elongated light emitter.

Plurality of reflective surfaces along an axis parallel to the axis of one elongated light emitter.

# References relevant to classification in this group

Plurality of reflective surfaces along an axis parallel to the axis of an light source formed of a plurality of light emitters, each light emitter corresponding to an individual reflective surface, i.e. array of light	F21V 7/0083

## Special rules of classification within this group

In this group, it is desirable to add the Indexing Codes of F21Y 2103/00

#### F21V 7/0058

[N:adapted to cooperate with light sources of shapes different from point-like or linear, e.g. circular light sources]

# Special rules of classification within this group

In this group, it is desirable to add the Indexing Codes of F21Y 2103/02

#### F21V 7/0066

[N:specially adapted to co operate with point like light sources; specially adapted to co operate with light sources the shape of which is unspecified (F21V 7/16 to F21V 7/22 take precedence)]

## References relevant to classification in this group

This subclass/group does not cover:

Construction of reflector with provision for adjusting the curvature	F21V 7/16
Construction of reflector with provision for folding or collapsing	F21V 7/18
Reflector constructed to facilitate cooling	F21V 7/20
Reflector characterised by the material; characterised by surface treatments or coatings	F21V 7/22

#### F21V 7/0083

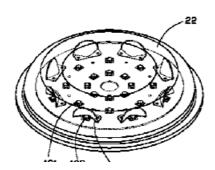
[N: Array of reflectors for a cluster of light sources, e.g. arrangement of multiple light sources in one plane (combination of two or more reflectors F21V 7/0025)]

#### **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

e.g.US2010328938: Plurality of individually removable identical reflectors on a planar matrix of LEDs



#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Combination of two or more reflectors	F21V 7/0025
for a single light source	

## F21V 7/0091

## [N:using total internal reflection]

#### **Definition statement**

This subclass/group covers:

Reflectors for rear vehicle light using total internal reflection.

Refractors having surfaces used for total internal reflection.

# References relevant to classification in this group

This subclass/group does not cover:

Reflectors for vehicle headlamps using total internal reflection	F21V7/00M4
using total internal reflection	

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Systems with reflecting surfaces, with	G02B 17/0868
or without refracting elements;	
Catadioptric systems for use with light	

emitter	

## Special rules of classification within this group

Reflectors for rear vehicle light using total internal reflection have to be also classified in **F21V7/00Q** 

Refractors having surfaces used for total internal reflection have to be also classified in <u>F21V 5/00</u>

#### F21V 7/04

## Optical design (F21V 7/22 takes precedence)

#### **Definition statement**

This subclass/group covers:

Reflector for which the surface is defined by mathematical formulae.

## F21V 7/09

#### with a combination of different curvatures

#### **Definition statement**

This subclass/group covers:

Also reflector surfaces with asperities

#### F21V 7/18

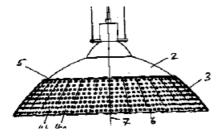
## with provision for folding or collapsing

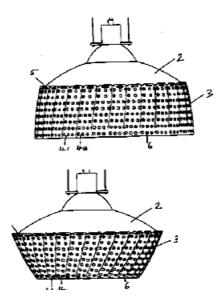
#### **Definition statement**

This subclass/group covers:

Illustrative examples of subject matter classified in this group.

e.g.DE202004011140U





# F21V 7/20

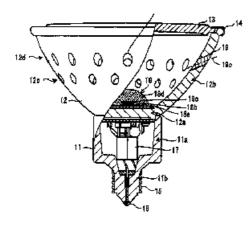
constructed to facilitate cooling, e.g. with fins (cooling by other means, e.g. fluid, <u>F21V 29/00</u>)

## **Definition statement**

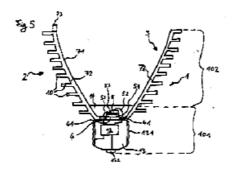
This subclass/group covers:

Illustrative examples of subject matter classified in this group.

e.g.JP2011228265



e.g.DE102004042186



Attention is drawn to the following places, which may be of interest for search:

Cooling by other means	F21V 29/00

## Special rules of classification within this group

F21V 7/20 is given in combination with the appropriate group in F21V 29/00

### F21V 7/22

# characterised by the material; characterised by surface treatments or coatings

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Multilayer mirrors	G02B 5/0816
Surface treatment of glass, at least one coating being a metal	<u>C03C 17/36</u>

## F21V 9/00

Light filters (coloured shades <u>F21V 1/00</u>); Selection of luminescent materials for light screens (luminescent materials per se <u>C09K 11/00</u>; electroluminescent light sources <u>H05B</u> 33/00)

# References relevant to classification in this group

Coloured shades	F21V 1/00
	15

Attention is drawn to the following places, which may be of interest for search:

Luminescent materials per se	C09K 11/00
Filters for vehicle headlamps or rear lamps	F21S 48/12, F21S 48/22
Combination of only two kinds of elements being reflectors and filters	F21V 13/08
Combination of only three kinds of elements being reflectors, refractors and filters	F21V 13/14
Changing the characteristics or distribution of the light emitted by adjustment of parts by movement of screens	F21V 14/08
Details of kinds concerned with light emission or distribution solely applicable to the electric portable lighting devices; Arrangements of coloured filters or screens	F21L 15/04

## F21V 9/02

for simulating daylight (<u>F21V 9/04</u>, <u>F21V 9/06</u>, <u>F21V 9/16</u> take precedence)

#### **Definition statement**

This subclass/group covers:

False windows are also covered by this subgroup

## References relevant to classification in this group

Light filters for filtering out infra-red radiatio	F21V 9/04

Light filters for filtering out ultra-violet radiation	F21V 9/06
Light filters; Selection of luminescent materials for screens	F21V 9/16

## F21V 9/04

# for filtering out infra-red radiation (using liquid-filled chambers F21V 9/12)

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Light filters for producing coloured light with liquid-filled chambers	F21V 9/12

## F21V 9/06

for filtering out ultra-violet radiation (F21V 9/16 takes precedence)

## References relevant to classification in this group

This subclass/group does not cover:

Light filters; Selection of luminescent materials for screens	F21V 9/16

#### F21V 9/08

for producing coloured light, e.g. monochromatic; for reducing intensity of light (F21V 9/16 takes precedence)

## References relevant to classification in this group

Light filters; Selection of luminescent materials for screens	F21V 9/16

Attention is drawn to the following places, which may be of interest for search:

Radiation therapy using light	A61N 2005/0663
characterised by the wavelength of	
light used; Coloured visible light	

## F21V 9/10

with provision for variation of the colour or intensity (<u>F21V</u> <u>9/12</u> takes precedence)

## References relevant to classification in this group

This subclass/group does not cover:

Light filters for producing coloured light with liquid-filled chambers	F21V 9/12
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## F21V 11/00

Screens not covered by groups <u>F21V 1/00</u>, <u>F21V 3/00</u>, <u>F21V 7/00</u> or <u>F21V 9/00</u>

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Screens, light shielding members for vehicle headlamps	F21S 48/14
Combination of only two kinds of elements being reflectors and screens	F21V 13/10
Changing the characteristics or distribution of the light emitted by adjustment of parts by movement of screens	F21V 14/08

## F21V 11/02

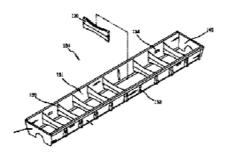
# using parallel laminae or strips, e.g. of Venetian-blind type (F21V 11/06 takes precedence)

## **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

e.g.US2010142197



## References relevant to classification in this group

This subclass/group does not cover:

Screens using crossed laminae or	F21V 11/06
strips	

## F21V 11/04

## adjustable

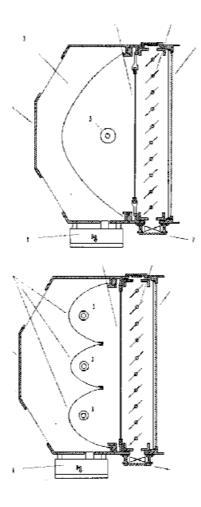
#### **Definition statement**

This subclass/group covers:

Adjustable lamellae

Illustrative example of subject matter classified in this group.

e.g.DE9420171U



Attention is drawn to the following places, which may be of interest for search:

Changing the characteristics or distribution of the light by movement	<u>F21V 14/08</u>
of screens	

## F21V 11/06

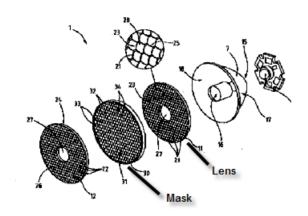
using crossed laminae or strips; [N: e.g. grid-shaped louvers]; using lattices or honeycombs

#### **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

e.g.WO2010007504



## F21V 11/14

## with many small apertures

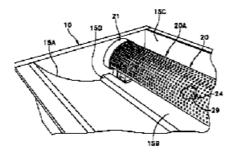
#### **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

e.g. US7588345

Polymeric light control film with holes on an elongated light source



## F21V 11/16

using sheets without apertures, [N: i.e. masks for shielding light,]e.g. fixed (F21V 11/02, F21V 11/06 take precedence; [N: for vehicle head lamps F21S 48/145])

# References relevant to classification in this group

Screens using parallel laminae or strips	F21V 11/02
Screens using crossed laminae or strips	F21V 11/06

#### F21V 11/18

## movable, e.g. flaps, slides

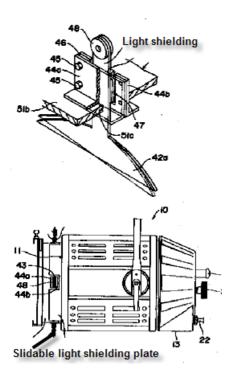
#### **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

e.g.WO2009096472

Light-shielding plates for stage projectors



#### F21V 13/00

Producing particular characteristics or distribution of the light emitted by means of a combination of elements specified in two or more of main groups F21V 1/00 F21V 11/00 (by means of a combination of two or more elements covered by a single one of main groups F21V 1/00 F21V 11/00, see the relevant group; changing the characteristics or distribution of the light emitted by adjustment of parts F21V 14/00)

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

By means of a combination of reflectors and refractors for vehicle rear lamps	F21S 48/24
By means of a combination of two or more elements covered by a single one of main groups F21V 1/00-F21V 11/00	<u>F21V 1/00</u> - <u>F21V 11/00</u>
Changing the characteristics or distribution of the light emitted by adjustment of parts	F21V 14/00
Details of kinds concerned with light emission or distribution solely applicable to the electric portable lighting devices	F21L 15/02

## F21V 13/02

# Combinations of only two kinds of elements

## Informative references

Attention is drawn to the following places, which may be of interest for search:

Systems with reflecting surfaces, with or without refracting elements for light condensing, e.g. for use with a light	
emitter	

## F21V 13/14

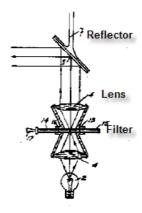
## the elements being reflectors, refractors and filters

## **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

e.g.DE550107C



#### F21V 14/00

Changing the characteristics or distribution of the light emitted by adjustment of parts or by interposition of elements with electrically controlled variable light transmissivity (reflectors with provision for adjusting the curvature F21V 7/16; light filters with provision for variation of colour or intensity F21V 9/10; screens using iris-type diaphragms F21V 11/10; adjustable mountings for lighting devices F21V 21/14)

## References relevant to classification in this group

Reflectors with provision for adjusting the curvature  Light filters with provision for variation of colour or intensity  Screens using iris-type diaphragms  E21V 11/10  Details regarding the mechanism for the adjustment of components of the lighting device  Details regarding the mechanism for the adjustment of the lamp holder or the light source  F21V 17/02  F21V 19/02  F21V 19/02  F21V 19/02  F21V 19/02  F21V 21/14  Adjustable mountings for lighting devices  Adjustable vehicle headlamp housing  B60Q 1/06	Deflection with annulation for a Part Co.	E04) / 7/40
Light filters with provision for variation of colour or intensity  Screens using iris-type diaphragms  F21V 11/10  Details regarding the mechanism for the adjustment of components of the lighting device  Details regarding the mechanism for the adjustment of the lamp holder or the light source  Adjustable mountings for lighting devices  F21V 17/02  F21V 19/02	, , ,	F21V 7/16
Screens using iris-type diaphragms  F21V 11/10  Details regarding the mechanism for the adjustment of components of the lighting device  Details regarding the mechanism for the adjustment of the lamp holder or the light source  Adjustable mountings for lighting devices  F21V 11/10  F21V 17/02  F21V 19/02  F21V 19/02		
Screens using iris-type diaphragms  F21V 11/10  Details regarding the mechanism for the adjustment of components of the lighting device  Details regarding the mechanism for the adjustment of the lamp holder or the light source  Adjustable mountings for lighting devices  F21V 11/10  F21V 17/02  F21V 19/02  F21V 19/02		
Details regarding the mechanism for the adjustment of components of the lighting device  Details regarding the mechanism for the adjustment of the lamp holder or the light source  Adjustable mountings for lighting devices  F21V 17/02  F21V 19/02  F21V 19/02		<u>F21V 9/10</u>
the adjustment of components of the lighting device  Details regarding the mechanism for the adjustment of the lamp holder or the light source  Adjustable mountings for lighting devices  F21V 19/02  F21V 21/14	Screens using iris-type diaphragms	F21V 11/10
the adjustment of components of the lighting device  Details regarding the mechanism for the adjustment of the lamp holder or the light source  Adjustable mountings for lighting devices  F21V 19/02  F21V 21/14	Details regarding the mechanism for	F21V 17/02
Details regarding the mechanism for the adjustment of the lamp holder or the light source  Adjustable mountings for lighting devices  F21V 19/02  F21V 21/14		
the adjustment of the lamp holder or the light source  Adjustable mountings for lighting devices  F21V 21/14	lighting device	
the adjustment of the lamp holder or the light source  Adjustable mountings for lighting devices  F21V 21/14		
Adjustable mountings for lighting devices  F21V 21/14	Details regarding the mechanism for	F21V 19/02
Adjustable mountings for lighting devices F21V 21/14	the adjustment of the lamp holder or	
devices	the light source	
devices		
	Adjustable mountings for lighting	F21V 21/14
Adjustable vehicle headlamp housing B60Q 1/06	devices	
Adjustable vehicle headlamp housing B60Q 1/06		
	Adjustable vehicle headlamp housing	B60Q 1/06

Attention is drawn to the following places, which may be of interest for search:

Details of kinds concerned with light	F21L 15/02
emission or distribution solely	
applicable to the electric portable	
lighting devices	

## Special rules of classification within this group

Details regarding the mechanism for the adjustment of components of the lighting device <u>F21V 17/02</u>, it is the desirable to give the Indexing Code of <u>F21V 14/04</u>, <u>F21V 14/06</u> or <u>F21V 14/08</u>

Details regarding the mechanism for the adjustment of the lamp holder or the light source <u>F21V 19/02</u>, it is then desirable to give the Indexing Code <u>F21V 14/02</u>

#### F21V 14/003

[N:by interposition of elements with electrically controlled variable light transmissivity, e.g. liquid crystal elements or electrochromic devices (liquid crystal elements <u>G02F 1/13</u>)]

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Liquid crystal elements	G02F 1/13
In vehicle headlamps	F21S 48/1731

## F21V 14/08

by movement of screens [N: or filters]

#### **Definition statement**

This subclass/group covers:

Changing characteristic or distribution of light by movement of screens or filters

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

In vehicle headlamps	F21S8/17S2
Adjustable lamellae	F21V 11/04
Movable screens being sheets without apertures	F21V 11/18

## F21V 15/00

Protecting lighting devices from damage [N: (gas-tight or water tight arrangements F21V 31/00)]

#### **Definition statement**

This subclass/group covers:

Protecting lighting devices from damage due to external interactions, e.g. anti-vandalism devices, cages

## References relevant to classification in this group

This subclass/group does not cover:

Gas-tight or water-tight arrangements	F21V 31/00

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Cooling or heating arrangements	F21V 29/00

#### F21V 15/01

Housings, e.g. material or assembling of housing parts (F21V 15/02 takes precedence; [N: housings forming signs or letters G09F 13/04])

## References relevant to classification in this group

Cages for protecting lighting devices	F21V 15/02
from damage	
	26

Housings forming signs or letters	G09F 13/0404

Attention is drawn to the following places, which may be of interest for search:

Lighting device essentially made of an elongated section for suspending at least one linear light source	F21S8/00H
Casings, cabinets or drawers for electric apparatus	H05K 5/00

## F21V 15/013

# [N:the housing being an extrusion]

#### **Informative references**

Attention is drawn to the following places, which may be of interest for search:

Lighting devices or systems using a string or strip of light sources Strings rigidly mounted on a frame	F21S4/00A

## F21V 15/02

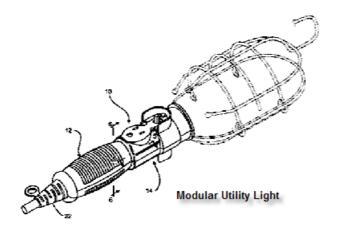
## **Cages**

#### **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

e.g.US2010061111



## F21V 15/04

Resilient mountings, e.g. shock absorbers (in general F16F 15/04; [N: shock absorbing devices of vehicle headlamp housings B60Q 1/0491])

## References relevant to classification in this group

This subclass/group does not cover:

Shock absorbing devices of	B60Q 1/0491
headlamp housings	

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Shock absorbing devices in general	F16F 15/04
Details of lighting devices employing liquid fuel as light source, not otherwise provided for; Fastening or safety devices for reflectors, cover glasses or chimneys; Protections against shocks	F21V 37/0091

## F21V 15/06

Thermal insulation [N: (for vehicle head lamps F21S 48/32)]

#### **Definition statement**

This subclass/group covers:

Means for screening the heat, e.g. screen for heat radiation

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Through holes in printed circuit board	H05K 1/0203
to screen conductive heat transfer	
from on one part to the other	

#### F21V 17/00

Fastening of component parts of lighting devices, e.g. shades, globes, refractors, reflectors, filters, screens, grids or protective cages (of light sources or light holders F21V 19/00; gas-tight or water-tight arrangements F21V 31/00) [N: for vehicle rear lights F21S 48/20; for vehicle head lights F21S 48/10])

## References relevant to classification in this group

This subclass/group does not cover:

Fastening of component parts of vehicle headlamps	F21S 48/1208, F21S 48/1305, F21S 48/155
Fastening of component parts of vehicle signal lamps	F21S 48/2206, F21S 48/232
Fastening of light sources or light holders	F21V 19/00
For gas-tight or water-tight arrangements	F21V 31/00

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Fastening or lifting of the lamp glass	F21L 19/003
of lanterns	

## F21V 17/007

# [N:with provision for shipment or storage]

#### **Definition statement**

This subclass/group covers:

Components of lighting devices intended to be easily dismounted or with reduced dismounted volume for shipment or storage

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Receptacles with Roll-up holders with pockets for separates articles (personal use); Not limited to lamps	A45C 11/26
Packaging for ampoules, lamp bulbs (for sale)	B65D 85/42
Supports or holders for coiled, wound or folded material	B65H 75/02
Machines, apparatus or devices for or method of packaging or material; unpacking	<u>B65B</u>
Foldable or collapsible frames for shades for light sources	F21V 1/06
Construction of reflector with provision for folding or collapsing	F21V 7/18
Packaging for ampoules or lamp bulbs, e.g. for sale	B65D 85/42
Supports or holders for coiled, wound or folded material	B65H 75/02

## F21V 17/02

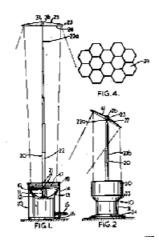
with provision for adjustment (<u>F21V 17/04</u>, <u>F21V 17/06</u>, <u>F21V 17/06</u>, <u>F21V 17/08</u> take precedence)

**Definition statement** 

This subclass/group covers:

Details regarding the mechanism for the adjustment

#### e.g.US3671735



# References relevant to classification in this group

This subclass/group does not cover:

Fastening of component parts of lighting devices, the fastening being onto or by the light source	F21V 17/04
Fastening of component parts of lighting devices, the fastening being onto or by the lampholder	F21V 17/06
Fastening of component parts of lighting devices, onto the supporting or suspending arrangements of the lighting device, e.g. power cords, standards	F21V 17/08

# Special rules of classification within this group

Always provide also the information which component is concerned by giving the relevant Indexing Code F21V 5/00-F21V 9/00; if the focus is on the change in the characteristics or distribution of the light emitted give also the Indexing Code R21

V14/04-<u>F21V 14/08</u>

## F21V 17/04

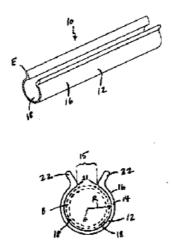
# the fastening being onto or by the light source

## **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

e.g.WO2010078339



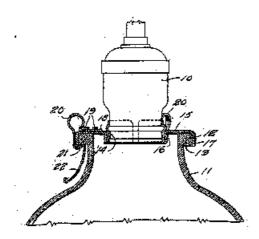
## F21V 17/06

# the fastening being onto or by the lampholder

### **Definition statement**

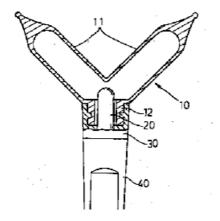
This subclass/group covers: e.g.US1293909

Electric light-globe holder



e.g.US2010046238

Outer shell structure of a decoration lamp string



## F21V 17/10

characterised by specific fastening means or way of fastening (F21V 17/02 to F21V 17/08 take precedence)

## References relevant to classification in this group

This subclass/group does not cover:

Fastening of component parts of lighting devices with provision for adjustment	F21V 17/02
Fastening of component parts of lighting devices, the fastening being onto or by the light source	F21V 17/04
Fastening of component parts of lighting devices, the fastening being onto or by the lampholder	F21V 17/06
Fastening of component parts of lighting devices, onto the supporting or suspending arrangements of the lighting device, e.g. power cords, standards	F21V 17/08

## F21V 17/101

# [N:permanently, e.g. welding, gluing or riveting]

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Joining or sealing of preformed parts,	B29C 65/00
	33

welding of plastics materials	
Joining sheets or plates, e.g. panels, to one another or to strips or bars parallel to them by means of riveting	F16B 5/04

#### F21V 19/00

Fastening of light sources or lampholders (fastening electric light source solely by the coupling device H01R 33/00; [N: special means for attaching the candle to the candle holder F21V 35/003])

## References relevant to classification in this group

This subclass/group does not cover:

Fastening electric light sources in vehicle headlamps	F21S 48/1104
Fastening electric light sources in vehicle signal lamps	F21S 48/211
Special means for attaching the candle to the candle holder	F21V 35/003
Fastening electric light source solely by the coupling device	H01R 33/00

#### F21V 19/0005

[N:of sources having contact pins, wires or blades, e.g. pinch sealed lamp (F21V 19/001 takes precedence)]

## References relevant to classification in this group

Fastening of removably mounted LEDs; Fastening of removably mounted PCBs holding light sources	F21V 19/001
mounted PCBs holding light sources	

#### F21V 19/001

[N:Fastening of removably mounted LEDs; Fastening of removably mounted PCBs holding light sources (F21S8/11A2, F21S 48/212 take precedence)]

## References relevant to classification in this group

This subclass/group does not cover:

Fastening of light sources or lampholders: Details of lamp holders, terminals or connectors for vehicle headlamps	<u>F21S 48/1109</u>
Fastening of light sources or lampholders: Details of lamp holders, terminals or connectors for vehicle rear lights	F21S 48/212

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Printed circuits structurally associated with non-printed electric components characterised by the use of a flexible or folded printed circuit	H05K 1/189
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## **Synonyms and Keywords**

In patent documents the following abbreviations are often used:

PCB	Printed Circuit Board
LED	Light Emitting Diode

#### F21V 19/006

[N:of point-like light sources, e.g. incandescent or halogen lamps, with screw-threaded or bayonet base (of sources having contact pins, wires or blades F21V 19/0005; of LEDs or sources mounted on printed-circuit board F21V 19/001]

## References relevant to classification in this group

This subclass/group does not cover:

Fastening of light sources or lampholders of sources having contact pins, wires or blades	F21V 19/0005
Fastening of removably mounted LEDs; Fastening of removably mounted PCBs holding light sources	F21V 19/001

## Synonyms and Keywords"

In patent documents the following abbreviations are often used:

LED	Light Emitting Diode

#### F21V 19/0075

# [N:of tubular light sources, e.g. ring-shaped fluorescent light sources]

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Holders formed as intermediate parts	H01R 33/942
for linking a counter-part to a coupling	
part for tubular fluorescent lamps	

#### F21V 19/0085

[N:at least one conductive element acting as a support means, e.g. resilient contact blades, piston-like contact]

#### Relationship between large subject matter areas

This group does not cover coupling devices in which a holder is adapted for supporting apparatus to which its counterpart is attached or separate parts thereof, see <u>H01R 33/08</u>: Two-pole devices for supporting tubular fluorescent lamps.

#### F21V 19/02

## with provision for adjustment, e.g. for focusing

#### **Definition statement**

This subclass/group covers:

Details regarding the mechanism for the adjustment of the light source or lampholder

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Changing the characteristics or distribution of the light emitted by movement of light sources	F21V 14/02

## Special rules of classification within this group

If the focus is on the change in the characteristics or distribution of the light emitted give also <u>F21V 14/02</u>

#### F21V 19/04

with provision for changing light source, e.g. turret [N: (auxiliary devices for cleaning, placing, or removing incandescent lamps H01K 3/32, fluorescent lamps H01J 9/006)

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Auxiliary devices for cleaning, placing, or removing incandescent lamps	H01K 3/32
Auxiliary devices for cleaning, placing, or removing fluorescent lamps	H01J 9/006

#### F21V 21/00

Supporting, suspending, or attaching arrangements for lighting devices (F21V 17/00, F21V 19/00 take precedence;

arrangement of signalling or lighting devices, the mounting or supporting thereof or circuits therefor, for vehicles in general <u>B60Q</u>, stands for supporting apparatus or articles in general <u>F16M 11/00</u>); Hand grips

## References relevant to classification in this group

This subclass/group does not cover:

Fastening of component parts of lighting devices	F21V 17/00
Fastening of light sources or lampholders	F21V 19/00

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangement of signalling or lighting devices, the mounting or supporting thereof or circuits therefor, for vehicles in general	B60Q
Stands for supporting apparatus or articles in general	F16M 11/00

## F21V 21/002

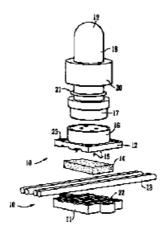
making direct electrical contact, e.g. by piercing (<u>F21V 21/35</u> takes precedence)

#### **Definition statement**

This subclass/group covers:

The housing of the lighting device or lampholder is equipped with needle contacts to pierce the cable insulator to connect while attaching the housing or lampholder to the cable.

e.g.WO2007023261



## References relevant to classification in this group

This subclass/group does not cover:

Supporting elements displaceable along a guiding element with direct electrical contact between the supporting element and electric conductors running along the guiding element	F21V 21/35
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## **Informative references**

Attention is drawn to the following places, which may be of interest for search:

Electrically-conductive connections	H01R 4/2404
between two or more conductive	
members in direct contact and means	
for effecting or maintaining such	
contact; Needle-point, slotted plate, or	
analogous contact members	
penetrating insulation or cable	
strands having at least one tooth,	
prong, pin or needle penetrating the	
insulation	

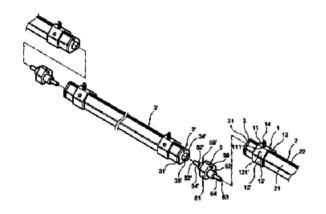
## F21V 21/005

for several lighting devices in an end-to-end arrangement, i.e. light tracks

**Definition statement** 

This subclass/group covers:

Housing of lighting devices mechanically in side-by-side or end-to-end contact e.g.EP2012054



#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Systems of lighting devices, not provided for in main groups F21S 4/00 to F21S 10/00 or F21S 19/00	F21S 2/00
Lighting devices or systems using a string or strip of light sources being lighting strips	F21S4/00C

## F21V 21/008

# Suspending from a cable or suspension line

#### **Definition statement**

This subclass/group covers:

Details of the suspending means from a cable or suspension line

#### Informative references

Lighting devices intended for fixed	F21S 8/06
installation intended only for mounting	
on a ceiling or like overhead structure	

### F21V 21/02

Wall, ceiling, or floor bases; Fixing pendants or arms to the bases (F21V 21/08 takes precedence; bases for movable standing lamps F21V 21/06)

## References relevant to classification in this group

This subclass/group does not cover:

F21V 21/08

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Bases for movable standing lamps	F21V 21/06
Installation of electrical cables or lines in buildings / Details / Distribution boxes / ceiling roses or other lighting sets	H02G 3/20

#### F21V 21/03

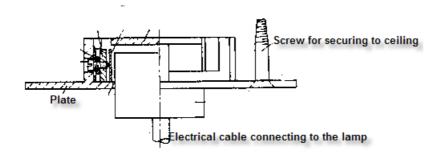
Ceiling bases, e.g. ceiling roses (F21V 21/04 takes precedence)

#### **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

e.g.FR2186626



## F21V 21/04

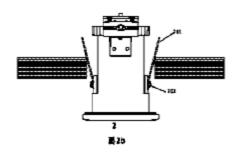
## **Recessed bases**

## **Definition statement**

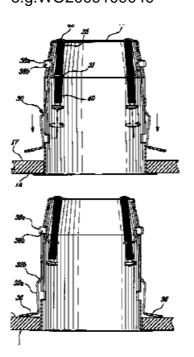
This subclass/group covers:

Details of the fastening means for a recessed lighting device

e.g.WO2010/135928

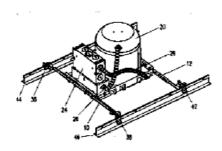


e.g.WO2009109049



#### e.g.US2010110705

Hanger bar for recessed lighting fixtures



#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements for fixing loudspeaker transducers, e.g. in a box, furniture	H04R 1/025

## Special rules of classification within this group

Generally no classification in F21S 8/02

#### F21V 21/06

Bases for movable standing lamps; Fixing standards to the bases (F21V 21/08 takes precedence)

#### **Definition statement**

This subclass/group covers:

Portable lighting devices provided with stands or bases to be used as a movable standing lamp

## References relevant to classification in this group

This subclass/group does not cover:

F21V 21/08

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Stands for supporting apparatus or articles in general	F16M 11/00
Electrical connection of the arms of a multi-armed chandelier	F21V 23/06
Mechanical connection of the arms of a multi-armed chandelier	F21V 21/02

## **Synonyms and Keywords**

In patent documents the following words "base", "Socles", "embase" and "piétement" are often used as synonyms

## F21V 21/08

# Devices for easy attachment to any desired place, e.g. clip, clamp, magnet

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Devices for fastening or securing constructional elements or machine parts together	<u>F16B</u>

#### F21V 21/084

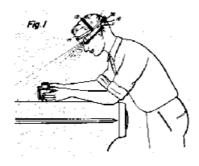
Head fittings (for medical purposes <u>A61B 1/06</u>[N: hats or helmets with lamps <u>A42B 3/044</u>])

#### **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

e.g.US3249271



## References relevant to classification in this group

This subclass/group does not cover:

Hats or helmets with lamps	A42B 3/044

## Informative references

Attention is drawn to the following places, which may be of interest for search:

Instruments for performing medical examinations of the interior of cavities or tubes of the body by visual or photographical inspection, e.g. endoscopes with illuminating arrangements	<u>A61B 1/06</u>
Supporting and suspending elements for a portable lighting device; Head fittings	F21L 15/14

## F21V 21/0885

# [N: portable lighting devices]

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Supporting and suspending elements	F21L 15/14
for a portable lighting device; Clips;	
Clamps	

## F21V 21/0925

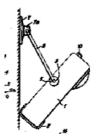
## [N: portable lighting devices]

#### **Definition statement**

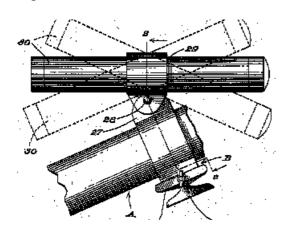
This subclass/group covers:

Illustrative example of subject matter classified in this group.

e.g.GB739441



e.g.US2402877



## F21V 21/10

Pendants, arms, or standards; Fixing lighting devices to pendants, arms, or standards (adjustable mounting F21V 21/14; construction of posts not peculiar to use with lighting devices E04H 12/00)

#### **Definition statement**

This subclass/group covers:

Access door to the inside of a pole for lighting device; compartments inside the lighting pole

## References relevant to classification in this group

This subclass/group does not cover:

Construction of posts not	peculiar to	E04H 12/00
use with lighting devices		
		46

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Adjustable mounting of lighting	F21V 21/14
devices	

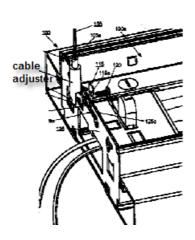
## F21V 21/112

# Fixing lighting devices to pendants (<u>F21V 21/002</u> takes precedence)

#### **Definition statement**

This subclass/group covers: e.g.US2008112172

Adjustment clip for a suspended light fixture



# References relevant to classification in this group

This subclass/group does not cover:

Supporting, suspending, or attaching	F21V 21/002
arrangements for lighting devices	
making direct electrical contact	

## F21V 21/116

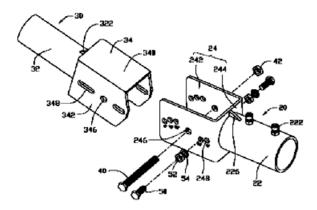
Fixing lighting devices to arms or standards (F21V 21/002

# takes precedence)

## **Definition statement**

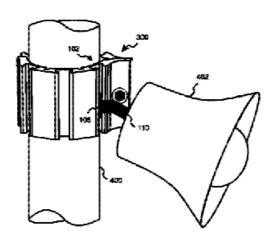
This subclass/group covers: e.g.US2011122634

Connector for connecting lamp to support



e.g.US2010102185

T-channel fixture-mounting pole clamp



# References relevant to classification in this group

This subclass/group does not cover:

Supporting, suspending, or attaching	F21V 21/002
arrangements for lighting devices	
making direct electrical contact	

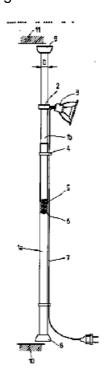
# Spring-loaded poles fixed at both ends

## **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

#### e.g.DE29703165U



## F21V 21/145

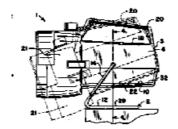
# [N: for portable lighting devices]

#### **Definition statement**

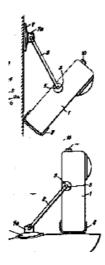
This subclass/group covers:

Portable lighting devices provided with adjustable stands or bases to be used as a movable standing lamp

#### e.g.US3936022



e.g.GB739441



## Special rules of classification within this group

Documents with this scope, published before 1985, are classified in the higher group F21V 21/14

## F21V 21/15

## specially adapted for power operation, e.g. by remote control

#### **Definition statement**

This subclass/group covers:

Lighting devices comprising electrical motor to actuate an adjustment movement of the lighting devices

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements of switches in or on lighting devices activated by remote	<u>F21V 23/0435</u>
control means	

#### F21V 21/22

## telescopic

#### Informative references

Telescopic towers; masts, poles	E04H 12/182

Undercarriages changeable in height or length of legs by telescoping	F16M 11/26

# F21V 21/24

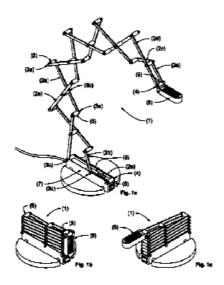
## Lazy-tongs

## **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.

e.g.DE102009010933



# F21V 21/29

# employing universal joints

## **Informative references**

Attention is drawn to the following places, which may be of interest for search:

Universal joints, i.e. with mechanical connection allowing angular movement or adjustment of the axes of the parts in any direction	F16L 27/02
or the parte in any direction	

## F21V 21/30

## **Pivoted housings or frames**

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Electric lighting devices with	F21L 4/04
self-contained electric batteries or	
cells characterised by the provision of	
a light source housing portion	
adjustably fixed to the remainder of	
the device	

## F21V 21/34

Supporting elements displaceable along a guiding element [N: (telescopic mounting of lighting devices <u>F21V 21/22</u>)]

## References relevant to classification in this group

This subclass/group does not cover:

Telescopic mountings of a lighting	F21V 21/22
device	

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Coupling parts adapted for	H01R 25/14
simultaneous co-operation with two or	
more identical counterparts, e.g. for	
distributing energy to two or more	
circuits; Rails or bus-bars constructed	
so that the counterparts can be	
connected thereto at any point along	
their length, e.g. track lighting	
systems	

#### F21V 21/36

Hoisting or lowering devices, e.g. for maintenance (F21V 21/14 takes precedence)

## References relevant to classification in this group

This subclass/group does not cover:

Adjustable mountings of lighting	F21V 21/14
devices	

## F21V 21/40

## **Hand grips**

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Operation lamp handles	A61B19/00N

## **Glossary of terms**

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

handle is defined to grab and/or manipulate/move the lighting device to a chosen position and not as being a handle on which a lighting device is or can be mounted.
or can be mounted.

#### F21V 21/403

## [N:for operation or dentist lamps]

# Special rules of classification within this group

In this group, it is desirable to add the Indexing Code  $\underline{F21W}$  2131/202 or  $\underline{F21W}$  2131/205

## F21V 21/406

# [N:for portable lighting devices]

#### Informative references

Supporting and suspending elements	F21L 15/08
for a portable lighting device	

### F21V 23/00

Arrangements of electric circuit elements in or on lighting devices (electric circuits per se H05B 39/00)

## References relevant to classification in this group

This subclass/group does not cover:

Electric circuits per se	H05B 39/00

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangement of electronic circuits separated from the light source for vehicle (e.g. mounting of housings for starter circuits for discharge lamps)	B60Q 1/0094
Arrangement of electronic circuits part of the light source or light source holder for vehicle (e.g. mounting of housings of starter circuits for discharge lamps)	F21S 48/1109

## F21V 23/04

the elements being switches (safety devices F21V 25/00)

#### **Definition statement**

This subclass/group covers:

Electric means varying continuously or discontinuously the light intensity, e.g. ON/OFF switch, potentiometer, dimmer,...etc

#### Informative references

Safety devices structurally associated	F21V 25/00
	54

with lighting devices	
Details of kinds solely applicable to the devices covered by groups F21L 2/00 to F21L 14/00 concerned with the fitting	F21L 15/06

#### F21V 23/06

## the elements being coupling devices, e.g. for shavers

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Line connectors; Current collectors	H01R

#### F21V 25/00

Safety devices structurally associated with lighting devices (gas-tight or water-tight arrangements <u>F21V 31/00</u>; in general <u>F16P</u>; protective circuit arrangements per se <u>H02H 7/00</u>)

#### **Definition statement**

This subclass/group covers:

Electromagnetic shielding of the lighting device

Intumescent material associated with lighting device

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Safety devices in general	<u>F16P</u>
Gas-tight or water-tight arrangements	F21V 31/00
Protective circuit arrangements per se	<u>H01H 7/00</u>

## F21V 25/02

# coming into action when lighting device is disturbed, dismounted, or broken

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Electric circuit per se	<u>H05B</u>

#### F21V 27/00

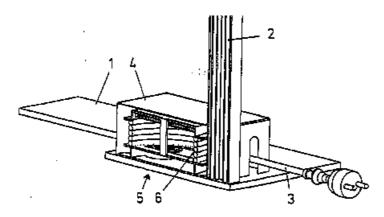
Cable-stowing arrangements structurally associated with lighting devices, e.g. reels (storing lengths of cable in general B65H); [N:the lighting devices being vehicle headlamps F21S 48/1109; the lighting devices being vehicle rear lights F21S 48/212]

#### **Definition statement**

This subclass/group covers:

Power cable winding device for a lighting device

e.g.DE202007002658U



### References relevant to classification in this group

This subclass/group does not cover:

Cable-stowing arrangements structurally associated with lighting devices, the lighting devices being vehicle headlamps	F21S 48/1109
Cable-stowing arrangements structurally associated with lighting devices, the lighting devices being	F21S 48/212

vehicle rear lights	

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Storing lengths of cable in general	<u>B65H</u>

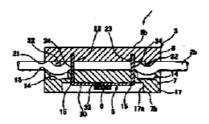
### F21V 27/02

#### Cable inlets

#### **Definition statement**

This subclass/group covers: Illustrative example of subject matter classified in this group.

e.g.US2010155135



#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Details of coupling devices of the	H01R 13/58
kinds covered by groups H01R 12/70	
or <u>H01R 24/00</u> - <u>H01R 33/00</u> ; Means	
for relieving strain on wire connection,	
e.g. cord grip	

## F21V 29/00

Cooling or heating arrangements (cooling of air-treatment systems with air-flow over lighting fixtures <u>F24F 3/056</u>; lighting fixtures combined with outlets for air-treatment systems <u>F24F 13/078</u>; cooling of projectors <u>G03B 21/16</u>) [N:

# cooling of lighting devices or systems specially adapted for vehicles $\frac{\text{F21S }48/32}{\text{F21S }48/32}$ ])

# References relevant to classification in this group

This subclass/group does not cover:

Cooling of air-treatment systems with air-flow over lighting fixtures	F24F 3/056
Lighting fixtures combined with outlets for air-treatment systems	F24F 13/078
Cooling of projectors	G03B 21/16
Cooling arrangements for gas- or vapour-discharge lamps	H01J 61/52
Cooling arrangements for electric incandescent lamps	H01K 1/58

## **Informative references**

Heat pipes	F28D 15/02
Cooling of vehicle headlamps or rear lamps	F21S 48/321
Heating or cooling of liquid crystal cells	G02F1/133T
Systems for controlling or regulating non-electric variables; Control of temperature	G05D 23/00
Details of data-processing equipment not covered by groups G06F 3/00 to G06F 13/00, e.g. cooling, packaging or power supply specially adapted for computer application; Constructional details or arrangements; Cooling means	G06F 1/20
Details of semiconductor or other solid state devices; Arrangements for	H01L 23/34

cooling, heating, ventilating or temperature compensation	
Semiconductor devices characterised by the semiconductor body packages; Heat extraction or cooling elements	H01L 33/64
Casings or enclosures with channels or ducts for flow of cooling medium	H02K 5/20
Thermal arrangements for printed circuits, e.g. for cooling or heating	H05K 1/0201

## F21V 29/002

## [N:Cooling arrangements (F21V 29/02 takes precedence)]

## References relevant to classification in this group

This subclass/group does not cover:

Cooling by forced air	F21V 29/02

## F21V 29/004

# Natural cooling, i.e. by natural convection, conduction or radiation

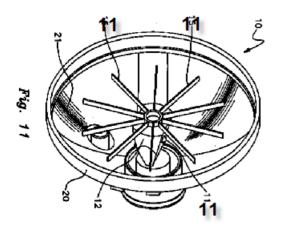
#### **Definition statement**

This subclass/group covers:

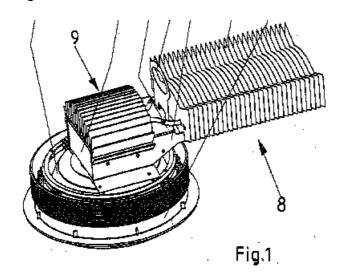
Housing or heatsink with cooling channel or chimney

Heatsink with fins

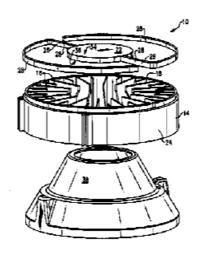
e.g.US2009002997 - a plurality of radially extending blade members (11)



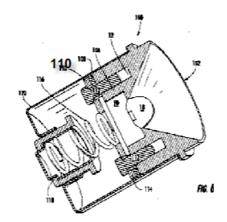
e.g.DE202009008456U



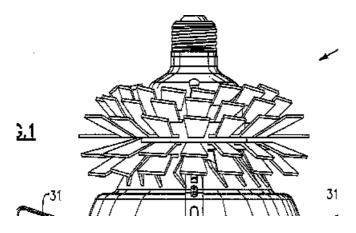
e.g.US2011050070 - see paragraph 79 - Heat pipe



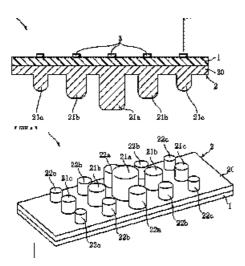
e.g.US2004190285 - see ref. 110 - Heat spreader plate



e.g.US2011074265



e.g.JP2009289772



# **Glossary of terms**

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

In this group, the following terms are used with the meaning indicated:

Fin	Two dimensional sheet of heat
	<u> </u>

	conductive material, thermally linked to the heat sink, having at least partially part of the both sides submitted to air in movement in order to extract heat therefrom.
--	---

## **Synonyms and Keywords**

In patent documents the following words "fin" "blade", "cooling vane", "ridge" and "ailette" are often used as synonyms

#### F21V 29/008

[N:Heating arrangements (heating arrangements structurally associated with electric lamps <u>H01J 61/52</u>)]

## References relevant to classification in this group

This subclass/group does not cover:

Heating arrangements structurally associated with electric lamps	H01J 61/52, H01K 1/58

#### F21V 29/02

Cooling by forcing air [N: or gas] over or around the light source (cooling arrangements structurally associated with electric [N: discharge or incandescent] lamps <u>H01J 61/52</u>, <u>H01K 1/58</u>)

## References relevant to classification in this group

This subclass/group does not cover:

Heating arrangements structurally associated with electric lamps	H01J 61/52, H01K 1/58

#### Informative references

Cooling, preventing overheating of projectors or projection-type viewers	G03B 21/16, G03B11/20

## F21V 31/00

## Gas-tight or water-tight arrangements

#### **Definition statement**

This subclass/group covers:
Sealing of lighting device housings

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Waterproofing of vehicle headlamps and signal lamps	F21S 48/33
Safety devices structurally associated with lighting devices	F21V 25/00
Cable-stowing arrangements structurally associated with lighting devices; cable inlets	F21V 27/02
Cooling devices	F21V 29/00
Casings, cabinets or drawers for electric apparatus; Hermetically-sealed casings	H05K 5/06

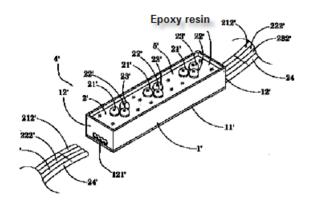
## F21V 31/04

Provision of filling media (safety devices <u>F21V 25/00</u>; cooling arrangements <u>F21V 29/00</u>)

#### **Definition statement**

This subclass/group covers: e.g.US2011085334

LED illuminating device with a transparent epoxy resin filling the shell to sealedly envelope the printed circuit board



#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Safety devices	F21V 25/00
Cooling arrangements	F21V 29/00

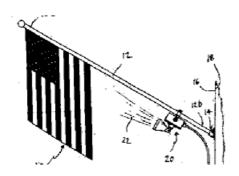
## F21V 33/00

# Structural combinations of lighting devices with other articles, not otherwise provided for

# **Definition statement**

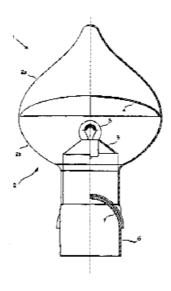
This subclass/group covers: e.g.US2006109651

Illuminated banners or flags (G09F 17/00: banners or flags)



e.g.WO9742449

Illuminated flagpoles (E04H 12/32: flagpoles)



# References relevant to classification in this group

This subclass/group does not cover:

Examples of places where the subject matter of this group is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Lights for cultivation in receptacles, forcing frames, greenhouses	A01G 9/20
Light emitting leads or collars	A01K 27/003, A01K 27/006
Aquaria	A01K 63/06
Fishing nets	A01K 75/02
Fishing baits	<u>A01K 85/01</u>
Rods with build-in accessories, e.g. lighting means or measuring devices	<u>A01K 87/007</u>
Catching insects	A01M 1/04
Baker's ovens	<u>A21B 3/10</u> , <b>F21S8/00G</b>
Gloves; Protective gloves with luminous or reflective means	<u>A41D 19/0157</u>
Luminous or luminescent artificial flowers, fruit, leaves, or trees	A41G 1/005
Helmet with lighting devices	A42B 3/0433 65

Footwear having light sources	A43B 3/001
Illuminated buckles	A44B 11/2565
Illuminated jewellery	A44C 15/0015
Sticks	A45B 3/02
Bags, purses, or the like	A45C 15/06
Toilet or cosmetic powder containers	A45D 33/32
Shaving mirrors	A45D 42/10
Adaptations for incorporating lamps to chairs	A47C 7/72
Attachments for beds; Lighting, radio, telephone or the like connected to the bedstead	A47C 21/003
Show cases or show cabinets with lighting devices	A47F 3/001
Show windows or showcases	A47F 11/10
Picture frames with illumination	A47G 1/0622
Illuminated underlays for glasses or drinking vessels	A47G 23/0309
Suction cleaners	A47L 9/30
Medical instruments for examining body cavities or tubes	A61B 1/00
Dental machines for boring or cutting; Machine parts specially adapted for dentistry; Illuminating devices or attachments	A61C 1/088
Curing dental plastics prostheses by light action	A61C13/15
Massage adapted for simultaneous treatment with light	A61H 15/02

Radiation therapy	<u>A61N 5/06</u>
Clubs	A63B 15/02
Illuminated balls	A63B 43/06
Roller skates or skate boards	A63C 17/26
Tops	A63H 1/24
Toy vehicles	A63H 17/28
Model railways	A63H 19/20
Spanners, wrenches, screwdrivers	B25B 23/18
Guiding devices for portable power. driven tools	B25F 5/021
Hair clippers or dry shavers	B26B 19/46
Accessories for razors	B26B 21/46
Photographic composing machines	B41B 21/08
Typewriters or selective printing machines	B41J 29/19
Support for notepads with light emitting devices	B42D 5/007
Writing implements	B43K 29/10
Lamps for baking lacquers used in painting or artistic drawing	B44D 3/24
Vehicle lighting or signalling	B60Q
Railway vehicles	B61D 29/00
Railway light signals	B61L 5/18
Points, form signals or gates	B61J9/00
Cycles	B62J 6/00 67
	1 01

B63B 45/00
B63C 9/20
B64D 47/02
B65D 51/248
B66B 11/0233
B67D5/66
D05B 79/00
E01F 9/016
E01F 9/053
E04H 15/10
E05B 17/10
F24C 7/082
F24F 3/056
F24F 13/078
F25D 27/00
F27D 21/02
F41G 1/35
G01C 9/32 68

Compasses	G01C 17/24
Measuring arrangements	G01D 11/28
Weighting apparatus	G01G 23/30
Thermometers	G01K 1/06
Speedometers	G01P 1/08
Instruments for measuring	G01R 1/08
Microscopes	G02B 21/06
Magnifying glasses	G02B 25/02
Viewing or reading apparatus	G02B 27/02
Light pointers	G02B 27/20
Optical instruments	G02B 27/34
Spectacles	G02C 11/04
Liquid crystals	G02F 1/1335
Electrochromic cells	G02F 1/157
Illuminating scenes for taking photographs	G03B 15/02
Cameras	G03B 15/03
Contact photographic printing	G03B 27/16
Projection photographic printing	G03B 27/54
Clocks	G04B 19/30
Time indicated by electric lamps	G04C 17/02
Time signalling by electric lamps	G04C 19/02
Visible signalling or calling systems	G08B 5/36
	69

Actuation of fire alarms	G08B 17/103
Traffic lights	G08G 1/095
Illuminated signs	G09F 13/00
Advertising or display means on roads or walls	G09F 19/22
Aircraft advertising	G09F 21/10, G09F 21/14
Advertising on ships	G09F 21/20
- Illuminated advertising on or in specific articles	G09F 23/04
Indicating elements or instruments	G12B 11/00
Illuminated switches	H01H 13/83
Indicating lamps in circuit-breaker switches	H01H 73/14
Indicating lamps in fuse	H01H 85/32
Lighting of aerials	H01Q 1/06
Coupling devices with build-in light bulbs	H01R 13/717
Pulse counter or frequency divider indicators using glow-discharge lamps	H03K 21/20
Illuminating of telephone substation equipment	H04M 1/22

# Special rules of classification within this group

Document classified here has to be forwarded to the field corresponding to the article in which the lighting device is integrated

# F21V 33/0012

## [N:Furniture (hospital beds F21V 33/0072)]

## References relevant to classification in this group

This subclass/group does not cover:

Hospital beds	F21V 33/0072

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Devices for lighting show cases or show cabinets	A47F 3/001
Arrangements of light sources in shop window	A47F 11/10

## Special rules of classification within this group

In this subclass, it is desirable to add the Indexing Code F21W 2131/301

#### F21V 33/0016

# [N:Furnishing for windows and doors (sunshades <u>F21V</u> <u>33/006</u>)]

## References relevant to classification in this group

This subclass/group does not cover:

Sunshades	F21V 33/006

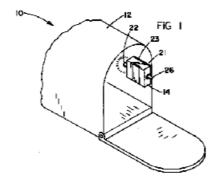
### F21V 33/0024

# Household or table equipment

#### **Definition statement**

This subclass/group covers: e.g.US6033084

Retrofittable mailbox light system (<u>A47G 29/12</u>, <u>A47G 29/1212</u>: Mail or newspaper receptacles)



[N:Paintings, pictures or photographs; Frames therefor]

## References relevant to classification in this group

This subclass/group does not cover:

Picture frames with illumination	A47G 1/0622

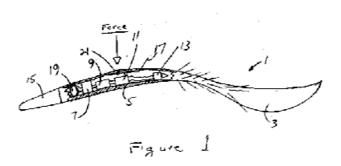
## F21V 33/0036

[N:Table-ware or table equipment, e.g. dishes, cutlery or trays]

#### **Definition statement**

This subclass/group covers:
Illuminated table-ware, spoons, pastry servers

e.g.US2009147503



#### Informative references

Drinking vessels or saucer used for table service with illumination means	A47G 2019/2238

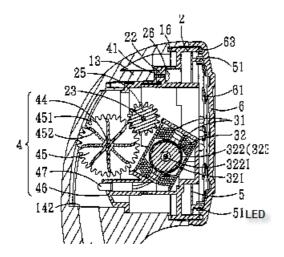
# [N:Sanitary equipment, e.g. mirrors, showers, toilet seats or paper dispensers]

#### **Definition statement**

This subclass/group covers:

Illustrative example of subject matter covered in this group.

e.g.EP2158972 - Illuminated shower heads



## References relevant to classification in this group

This subclass/group does not cover:

<b>-</b>	
Brushes with additional arrangements	<u>A46B 15/00</u>
Mirrors for household (also bathroom)	<u>A47G 1/02</u>
Croall reignage (hand nacket ecomotic	A 4ED 40/40
Small mirrors (hand, pocket, cosmetic	A45D 42/10
or shaving mirrors)	
,	
1.6	404546455
Mirrors for medical purposes (e.g.	A61B1/247B
dentistry)	
doriadayy	
Rear mirrors for vehicles	B60R 1/00

#### Informative references

Nozzles, spray heads or other outlets,	B05B 1/00
with or without auxiliary devices such	
as valves, heating means	

# [N:Household appliances, e.g. washing machines or vacuum cleaners]

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Refrigerators; cold rooms; ice-boxes;	F25D 27/00
cooling or freezing apparatus not	
covered by any other subclass;	
lighting arrangement	

## Special rules of classification within this group

In this , it is desirable to add the Indexing Codes of  $\underline{\text{F21W 2131/305}}$  for illumination for refrigerators

#### F21V 33/0048

[N:Office articles, e.g. bookmarks, desk lamps with drawers, stands for books or music scores]

# Special rules of classification within this group

In this subclass, it is desirable to add the Indexing Codes of <u>F21W 2131/3005</u> for reading lights attachable to books

#### F21V 33/0056

[N:Audio equipment, e.g. music instruments, radios or speakers]

#### Informative references

Details of transducers, loudspeakers	H01R1/00
or microphones	

[N:General building constructions or finishing work for buildings, e.g. roofs, gutters, stairs or floors; Garden equipment; Sunshades or parasols]

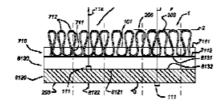
#### **Definition statement**

This subclass/group covers:
Stairs with illumination (<u>E04F 11/00</u>)

Illuminated tiles (E04F 15/00)

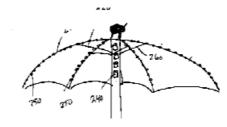
e.g.WO2010092509

Carpets; Stair runners; Bedside rugs; Foot mats (A47G 27/02)



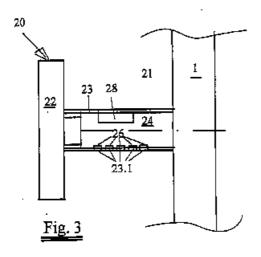
e.g.US2004212997

Sunshade, patio umbrella



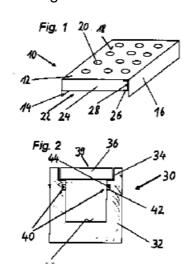
e.g.DE202010000087U

Illuminated handle for door, drawer



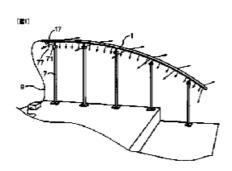
e.g.DE102007057214

Drain gutter with illumination



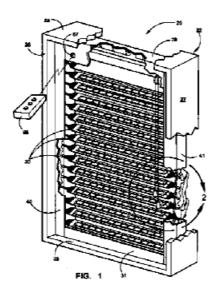
e.g.WO2011055488

Illuminated handrail (E04F 11/00)



e.g.US2007175599

Illuminated window blind assembly (E06B 9/386)



## References relevant to classification in this group

This subclass/group does not cover:

Illuminated umbrella	F21V 33/0004

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

General building constructions; walls; roofs; floors, ceiling, insulations or other protection of buildings	<u>E04B</u>
Finishing work on buildings, e.g. stairs, floors	<u>E04F</u>
Fixed or movable closures for openings in building, fences, e.g. doors, windows, blinds, gates	<u>E06B</u>

# Special rules of classification within this group

In this subclass, it is desirable to add the Indexing Codes of subclasses  $\frac{F21W}{2111/08}$  for illuminated handrails

## F21V 33/0076

[N:Safety or security signalisation, e.g. smoke or burglar

## alarms, earthquake detectors; Self-defence devices]

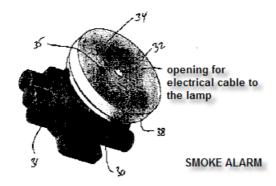
#### **Definition statement**

This subclass/group covers:

Illumination associated with smoke detector (G08B 17/10)

Illumination associated with burglar alarm detector (G08B 13/00)

e.g.WO2011042020



## Relationship between large subject matter areas

Sighting devices, night sights, e.g. luminescent, combined with light source, e.g. spot-light for illuminating the target, e.g. flash lights or not covered by this group and classified in F41G 1/35

## F21V 33/008

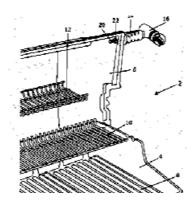
[N:Leisure, hobby or sport articles, e.g. toys, games or first-aid kits; Hand tools; Toolboxes]

#### **Definition statement**

This subclass/group covers: Illumination for barbecues

Illumination for first aid kits or toolboxes

e.g.US2004228117



## Informative references

Attention is drawn to the following places, which may be of interest for search:

Apparatus for physical training, gymnastics, swimming, climbing or fencing; ball games; training equipment	<u>A63B</u>
Skates; skis; roller skates, design or layout or courts, rinks or the like	<u>A63C</u>
Toys, e.g. tops, dolls, hoops, building blocks	<u>A63H</u>

## F21V 33/0088

# [N:Ventilating systems (lighting fixtures combined with outlets for air treatment systems <u>F24F 13/078</u>)]

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Lighting fixtures combined with outlets for air treatment systems	F24F 13/078

## F21V 33/0096

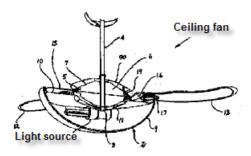
[N: Fans, e.g. ceiling fans (forced cooling for lighting devices F21V 29/02)]

#### **Definition statement**

This subclass/group covers:

Combined light fitting and ceiling fans

#### e.g.WO2007006096



## References relevant to classification in this group

This subclass/group does not cover:

Air forced cooling for lighting devices	F21V 29/02

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Ceiling fans	F04D 25/088

### F21V 35/00

#### **Candle holders**

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Candles per se	<u>C11C 5/00</u>
Non-electric lighting devices or systems employing a point-like light source	F21S 13/00

# Special rules of classification within this group

In this subclass, it is desirable to add the Indexing Codes of <u>F21W 2121/002</u> for candle holders for birthday or anniversary cakes

#### F21V 35/003

# [N:Special means for attaching the candle to the candle holder]

## References relevant to classification in this group

This subclass/group does not cover:

Fastening of light sources or	F21V 19/00
lampholders	

#### F21V 36/00

Arrangements of mantles or other incandescent bodies on burners (attaching to lamp parts F21V 19/06)

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Attaching to lamp parts	F21V 19/06

#### F21V 37/00

Details of lighting devices employing combustion as light source, not otherwise provided for; Night lamps; Votive lamps

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

Burners for combustion of a gas	F23D 14/00

#### F21V 37/0025

[N:vegetal (F21V 37/0033 takes precedence)]

## References relevant to classification in this group

This subclass/group does not cover:

Combination of mineral and vegetal	F21V 37/0033

## F21V 37/0029

[N:mineral (F21V 37/0033 takes precedence)]

## References relevant to classification in this group

This subclass/group does not cover:

Combination of mineral and vegetal	F21V 37/0033

#### F21V 37/0079

[N:Fastening of chimneys (F21V 37/0087 takes precedence)]

### References relevant to classification in this group

This subclass/group does not cover:

Devices for lifting chimneys or cover	F21V 37/0087
glasses	

#### F21V 37/0083

# [N:Fastening of cover glasses (F21V 37/0087 takes precedence)]

## References relevant to classification in this group

This subclass/group does not cover:

Devices for lifting chimneys or cover	F21V 37/0087
glasses	

## F21V 37/02

Special adaptation for protection against draughts (for lanterns F21L 19/006); Draft controllers

#### Informative references

For lanterns	F21L 19/006

# F21V 99/00

Subject matter not provided for in other groups of this subclass